

**North Atlantic Right Whale Recovery Plan  
Southeast U.S. Implementation Team Meeting, October 17-18, 2011  
Jacksonville, FL**

**KEY OUTCOMES MEMORANDUM**

**I. Overview**

The North Atlantic Right Whale Recovery Plan Southeast U.S. Implementation Team (SEIT) conducted a meeting on October 18 in Jacksonville, Florida. The SEIT meeting was preceded by a Southeast Right Whale Forum on October 17 at the same meeting location. The Forum agenda was planned with input from the SEIT in order to facilitate priority information updates and discussion with participants and the SEIT members. The October 17 agenda is attached. The October 18th SEIT meeting focused on two primary objectives:

- Update on Consensus Actions from May 25<sup>th</sup> meeting,
- Develop feedback to SERO on specific recovery/management objectives in the core calving area that are best accomplished through aerial surveys.

The SEIT focused the majority of its time on aerial survey-related discussions, in particular the EWS.

This Key Outcomes memorandum summarizes the primary results of the SEIT meeting. In general, the synthesis integrates the main themes discussed at the meeting and are presented in five main sections: Overview, Participants, Meeting Materials, Key Outcomes, and Next Steps. The Key Outcomes section is further segmented into the following six sections:

- Welcome and Introductions. This section provides a brief overview of meeting, purpose, and agenda overview.
- Update on consensus actions. This section provides an update on action items identified during the May 25<sup>th</sup> meeting.
- Focused SEIT discussion on aerial surveys and information requested by SERO.
- Consensus Actions. This section summarizes consensus actions to be taken by the Team.
- Consensus Recommendations. This section summarizes consensus recommendations of the SEIT.
- Other. This section summarizes other topics discussed during the meeting.

**II. Participants**

The SEIT meeting was attended by 11 of the 13 Team members and included: Nancy Allen, Lance Garrison, Clay George, Mike Getchell, Bill Kavanaugh, Amy Knowlton, Bill McLellan, Katie Moore, Cathy Sakas, Leslie Ward-Geiger, and Tom Wright.

Greg Schweitzer and Barb Zoodsma with the SERO was in attendance as was Jim McGlaughlin, SERO's contracted shipping liaison.

**III. Meeting Materials**

The following materials were distributed via email to the SEIT prior to the meeting and hard copies were provided at the meeting:

- Draft meeting agenda (developed following SEIT agenda planning call).
- Focused discussion paper produced by SERO, *SERO Requests Input on SE Calving Area Aerial Surveys*.
- Discussion paper produced by SEIT aerial sub-committee: *Aerial Surveys for Detection of North Atlantic Right Whales in the Southeastern U.S.: Conceptual Framework Developed by the Southeast U.S. North Atlantic Right Whale Recovery Plan Implementation Team Sub-Committee*.

Copies of these materials can be obtained by emailing [Barb.Zoodsma@noaa.gov](mailto:Barb.Zoodsma@noaa.gov).

#### **IV. Key Outcomes**

Below is a summary of the main topics and issues discussed during the meeting. This summary is not intended to be a meeting transcript. Rather, it provides an overview of the main topics covered, the primary points and options raised in the discussions, and areas of full or emerging consensus.

##### **A. Welcome and Introductions**

The meeting kicked off with a brief review of the meeting purpose and self-introductions.

##### **B. Update: Consensus Actions from May 25<sup>th</sup> Meeting**

1. B. Zoodsma has been coordinating with A. Samuels, OLE, on protocols for aerial survey teams regarding potential 500 yard rule violators.
2. The Team asserted its continued interest in the status of developing demographically-based recovery criteria and the need to better understand the extent that population metrics are reliant on SEUS monitoring efforts. For example, SEUS efforts are important to monitor vital rates such as age-specific survival, age-specific reproduction, and lifetime reproductive success. (see section on Consensus Recommendations).
3. B. Zoodsma consulted with HQ –the report on the effectiveness of the ship strike rule will be available to the SEIT when it is released to the public.
4. There has been no additional movement on the passive acoustic monitoring front. Moved to future agenda.
5. Discussion on the SEFSC auto detection buoys was deferred.
6. Stranding communication networks will be reinforced in a pre-season email from the regional stranding coordinator to the SE marine mammal stranding email distribution list. Also, information on how to report a dead or injured right whale is included in NGA Notice to Mariner, British Admiralty Guide to Port Entry, NOAA Coast Pilot and National Weather Service Marine Broadcasts, USCG Local Notice to Mariner and Maritime Safety Information bulletins.
7. A. Costidis report has not yet been reviewed with anyone from Dominey Machine and Propeller Services, Inc. for their feedback. However, T. Wright discussed the strike event with Dominey Machine and, based on the information T. Wright had at the time, their input was that the vessel that struck right whale #3853 was likely 100-120' in length.

8. A. Costidis agreed to the distribution of the forensics report he and coauthors generated on the analysis of wounds observed on right whale #3853 on January 20, 2011. B. Zoodsma emailed the report to SEIT members on July 12, 2011.
9. A conversation between the SEIT and T. Frasier has not happened re: timely/accessible genetics info. However, a biopsy meeting will take place in New Bedford as a side meeting to the Consortium meeting –this might be an opportunity to have this discussion.
10. Due to time constraints, the SEIT will review May 2011 Consensus Actions #11- 22 via email to Team Lead. Lead will compile updates 11- 22.

### **C. Focused SEIT discussion on priority management objectives and aerial surveys**

For the majority of the meeting, the Team focused on key management/recovery objectives for the core calving area aerial surveys. The discussion was kicked off by an introductory statement by B. Zoodsma, SERO.

#### Introductory Statement: B. Zoodsma

B. Zoodsma acknowledged that reviewing the effectiveness of the Southeast U.S. aerial surveys was more challenging than originally anticipated. However, the SEIT discussions have been very helpful on many levels, including challenging the SERO to contemplate what specific aerial survey-related questions SERO seeks input on. (The SERO's questions are explicitly laid out in the focused discussion paper that was produced by SERO.) The driving force behind this effort is that SERO invests ~51% of their right whale specific (?) budget into SE aerial surveys. Given such a large investment, SERO seeks input on whether we are focusing on appropriate objectives and if the aerial surveys are efficiently and effectively addressing those objectives. Additionally, budgets are likely to shrink –either due to overall budget reductions, or the need to implement additional recovery actions (e.g. revisit mid-Atlantic vessel strike mortalities) and we would like input on how surveys should be modified to accommodate potential financial changes. B. Zoodsma suggested the conversation be restricted initially to the core calving area surveys (SC-FL) because of the significant budgetary investment and this is likely where SERO funds would come from to implement outstanding recovery tasks. Modification to contract scope of works can be considered on an annual basis but must be mutually agreeable between NOAA and contractor (large changes in scope may require re-solicitation of contract).

#### Feedback on Aerial Survey Objectives

The Team discussed NOAA's key management/recovery objectives in the right whale core calving area best accomplished through aerial surveys (Attachment 1 of SERO's focused discussion paper). Information needs were identified and are listed in the Consensus Actions section.

#### **1. Reduce or eliminate vessel collisions with right whales.**

- a. The existence of the ship strike reduction rule and recommended lanes and how the aerial surveys supplement those for ship strike reduction purposes led to much discussion. The team noted that when the EWS surveys were initially developed, the ship strike reduction rule and recommended lanes

were not in place and the surveys were used for real-time risk reduction. These newer protection measures aim to address the original intent of the EWS surveys (to reduce risk from ship strike collision).

The Team then discussed whether emphasis of SE aerial surveys should shift away from ship strike reduction efforts while the measures are in place (the ship strike reduction rule is set to sunset on December 9, 2013) and potential information/needs to inform this decision. The SEIT Mariner Survey will continue to be distributed this winter as a means to acquire information on how the EWS aerial information is used by mariners. Early results from the mariner survey indicate that <24 hour-old alerts are valuable to the mariner – supporting the role of aerial surveys for ship collision mitigation. Currently there are > 150 EWS “subscribers” receiving whale location information.

There are a number of limiting factors regarding aerial surveys for ship collision mitigation including: a) surveys are not flown as frequently as 12-24 hours (low visibility due to night, fog, etc. –how often do optimal environmental conditions present for surveys?); b) right whales are not 100% detectable/available from the air; c) whales often are not stationary (how fast/far will whales of various demographic groups move in 12-24 hours?); and d) mariners may misinterpret a few known sighting locations as representing all whales present and may lower awareness in areas where sightings are not reported. However it was also stated that mariners who transit the area on a regular basis are familiar with the difficulty in sighting whales and believed awareness would not be lessened as suggested.

Multiple protection measures including the ship speed rule, recommended lanes, and general right whale distribution information supplied to mariners east of sea pilot buoys may adequately address risk to right whales from ship collision. The Team discussed the pros-cons of specific whale locations vs. identification of “higher use areas” within bins. The current EWS message bin boundaries may need to be assessed if the specificity of the transmitted locations is modified—for example, we may need smaller bins. However, the Team did not come to agreement on what spatial scale (general area around port entrance, distribution of dense whale aggregations, individual whale sightings) or temporal scale (daily, weekly, etc.) to which “general right whale distribution information” referred.

A potential strategy is an aerial survey team specifically dedicated to vessel collision mitigation. Under this model, flights could be scheduled to coincide in space and time with ship traffic. Methods that were discussed for detecting whales included targeted channel aerial surveys, less frequent aerial surveys to detect within season general distribution, and dedicated whale observers placed on ships or pilot vessels.

- b. The team generally agreed it was important to provide some level of input to harbor pilots regarding right whale activity. Harbor pilots will likely avoid transits into limited navigation areas (inlets, narrow channels) if whales were known to be present. Anecdotal reports substantiate this (Cape Canaveral, Crowley Tug/Jax, SFR incursion, etc.).
- c. DMAs are generated from air survey observations and occasional whale/vessel interaction events are mitigated in real time.
- d. The SEIT agreed that mitigating recreational vessel collisions should not be an objective of SE right whale aerial surveys. Rather, there may be other tools (education and outreach, directed research such as the UF study, etc.) that are more effective and cost efficient at addressing this risk.

**2. Monitor Trends in human-related injuries so that ongoing and emerging threats are recognized and risks reduced.**

- a. The Team noted that aerial surveys seem to be an important tool for carcass and entangled/injured whale detection. However, mortality and other databases should be scoured to determine proportion of events that are detected via aerial surveys.
- b. The Team was uncertain of the extent that the aerial surveys contribute towards reporting of serious injury/determinations.
- c. The Team noted that aerial survey detections of injured whales occasionally provide insights into vessel strike injuries and possible vessel types involved with whale interactions.
- d. The Team considered the potential implications of minimal survey effort on flexibility to respond to special whale circumstances/emergencies (i.e. responding to injured or compromised individual whales vs. monitoring population). B.Zoodsma allowed that NMFS would likely opt to aid an injured or compromised whale at the expense of monitoring efforts. The Team discussed that survey design would likely be different for response to individual entangled whales vs. large-scale monitoring of injuries/deaths on a regional basis. Is 1000ft altitude optimal for finding carcasses?
- e. The Team noted that the aerial surveys were useful in detecting emerging issues such as previously unknown human activities within the calving area (vessels, fishing activity, etc.).
- f. If carcass/injury detections were the highest priority, an optimal survey design for that purpose may be broader in scale and flown in various sea states. A goal would be to get to a carcass asap (reduce decomposition) therefore flights would ideally be frequent.
- g. Alternative actions were high definition, high altitude photography to detect injury/carcasses, customized tasking of a satellite, BOEM surveys,

**3. Monitor the need for regulatory mechanisms**

The SEIT considered existing regulatory actions (e.g. ALWTRP, ship speed rule, etc.) and agreed that all could be addressed through objective #2.

**4. Protect important habitat –characterize habitat use patterns and distribution and detect changes.**

The Team agreed that the aerial surveys, as presently designed, were limited for obtaining information on habitat use at a wide-scale level. If the objective of the aerial surveys is to investigate habitat use, surveys should be flown in areas outside of known habitats such as “shoulder” areas. Habitat models indicate that areas north of the EWS may be important--need to validate the models. Sightings per unit effort (SPUE) lower in mid-Atlantic, less flown and perhaps challenging environmental conditions for surveys. For example, we are data poor in the areas from Chesapeake Bay to Savannah and south of the EWS area relative to the EWS survey area. Expanding populations may tend to use areas not commonly used previously -founder animals may be exploring new areas. Random design, broad-scale surveys similar to NE surveys may help locate these animals/areas. Alternative actions discussed include satellite tagging and broadscale surveys. The Team suggested that the NE broadscale surveys be evaluated in terms of design impacts on key management objectives.

**5. Contribute demographic information for use in population models**

- a. The SEIT concurred that demographic information is an important priority for SE aerial surveys. Demographic information feeds into survivorship info, population models, etc. Specifically, the following can only be obtained via SE surveys:
  - i. Calving production rate and calf survival.
  - ii. Sightings of non-Bay of Fundy moms.
  - iii. Reproducing female survival –this is a critical population rate component.
- b. The importance of articulating the information requirements for recovery metrics such as population growth rate was recognized so that appropriate monitoring plans are developed. Need feedback on model parameters and model assumptions to better help us understand and put this in perspective. To what extent does the SE surveys contributed to mark-recapture studies for non-reproducing females, juveniles, and males? It was noted that there hasn't been an updated demographic analysis since Fujiwara and Caswell (they used data through 1999).
- c. Team members also acknowledged that vessel-based work may also be contributing to demographic studies. While it was unclear as to the extent of these contributions, vessel work may provide all of the elements needed in Objective # 2.

**6. Promote stewardship through public awareness via timely distribution of information.**

- a. Many SEIT members felt that aerial surveys were not an appropriate tool to promote stewardship. However, others wanted to investigate the linkages between mariner outreach items and survey sightings to better assess the effectiveness of aerial surveys in addressing this objective.

SEIT concurred that the following recovery/management tasks are important objectives of the SE core calving aerial surveys. The Team conditionally and initially prioritized the objectives in the following order<sup>\*\*\*</sup>:

1. Demographics
2. monitoring trends in human-related injuries deaths
3. mitigating vessel collisions are important recovery tasks (contingent upon speed rule and recommended lanes)
4. characterizing habitat use

\* Emergency response (rescues/dead whale response) is an assumed priority.

\*\* Information gaps (see Consensus Actions) need to be filled to better inform the SEIT prior to formalizing the list.

#### **D. Consensus Recommendations**

1. NMFS should consult the SRG regarding current demographic analyses/estimates of the right whale population. Goal is to obtain annual estimates with as little lag as possible. Methods should be robust enough to detect inter-annual trends.

#### **E. Consensus Actions**

A number of information needs were identified while discussing SEIT feedback to SERO on the management objectives in the core calving area that are best accomplished through aerial surveys. This information needs are as follows (also see draft aerial conceptual framework):

1. Correct Whale/Vessel Interaction incidents per unit of effort to determine if areas have greater incidence of interactions than other areas.
2. What are all the communication linkages between aerial survey-generated sightings and mariner outreach products (such as EWS, NOAA website info)?
3. How fast/far do whales in the core calving area move? Is movement rate different between demographic groups? (this question relates to EWS alerts/potential bin use for more general sighting updates)
4. What proportion of time are environmental conditions appropriate for detecting whales? (EWS discussion)
5. What is the proportion of rec. vs. commercial vsls as seen in wvi records?
6. How many and where have carcasses been detected by aerial surveys since 2004? (Amy and NMFS to investigate)
7. How many and where have entangled whales been detected by aerial surveys since 2004?
8. Do aerial surveys contribute relevant information to serious injury determinations?
9. What amount of demographic information is contributed by vessel-based work in the SE? Is the vessel based work dependent to some extent on aerial surveys?
10. How does sightings per unit of effort from GASC surveys compare to other areas?

11. Need to update habitat models –this should be an important part of this analysis since the more refined the habitat model is, the more refined the risk assessment model is (mgmt boundaries).

#### **F. Other**

- NMFS should provide regular calving season updates to the media.

#### **V. NEXT STEPS**

1. Key outcomes will be drafted and distributed for review and finalization by SEIT.
2. Team members will review notes and obtain input from Team members not able to attend the meeting –paying particular attention to aerial survey objectives.
3. The final SEIT notes will be provided to SERO for feedback on SEIT deliberations regarding the survey objectives and priorities.
4. The SERO will provide feedback to the SEIT via B. Zoodsma and L. Ward. At that time a conference call will be scheduled with the Team for feedback on our letter to Dr. Crabtree and to receive feedback on #3 above.
5. If SERO is aligned with SEIT Fall outcomes re: aerial surveys, then SEIT will develop matrix to help organize information used to evaluate effectiveness of current aerial survey strategies per management objectives. Include information gaps and alternative actions.
6. Identify who will be responsible for action items (to fill data gaps identified in under Consensus Actions section).
7. In February, general concept could be presented to Scientific Review Group (SRG) for feedback...this was a suggestion.
8. The SEIT recommendation letter to SERO will be sent to Tom Pitchford for distribution to forum members.
9. A second conference call will be scheduled to discuss:
  - a. Passive acoustics –what are we getting out of it?
  - b. Next focus for SEIT (after SE calving season surveys): PAM, MAUS, Genetics, E&O working group
  - c. Action items after #10- please send Leslie your updates via email.